

**Notes and New Species of Limnephilid
Caddisflies from Idaho**
(Trichoptera: Limnephilidae)

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While re-examining several collections in preparation for an annotated list of Idaho Trichoptera, some previously undescribed species were found. Also, a nomenclatorial change is necessary for a species that I recently described. This paper presents descriptions and figures of the new species of Limnephilidae and makes the appropriate name change. I wish to express my appreciation to Dr. W. F. Barr, University of Idaho, for reading the manuscript, and to Dr. R. J. Boles, Central Washington State College, for his assistance with the illustrations.

ARCTOPORA SALMON (Smith) new combination

Lenarchulus salmon Smith, 1969, J. Kansas Entomol. Soc., 42: 50.

Since I described this species it has been brought to my attention that Schmid (1952) was in error in erecting the genus *Lenarchulus* for *Phryganea trimaculata* Zett. My species (*salmon*) should have been described in the genus *Arctopora* because of generic synonymy.

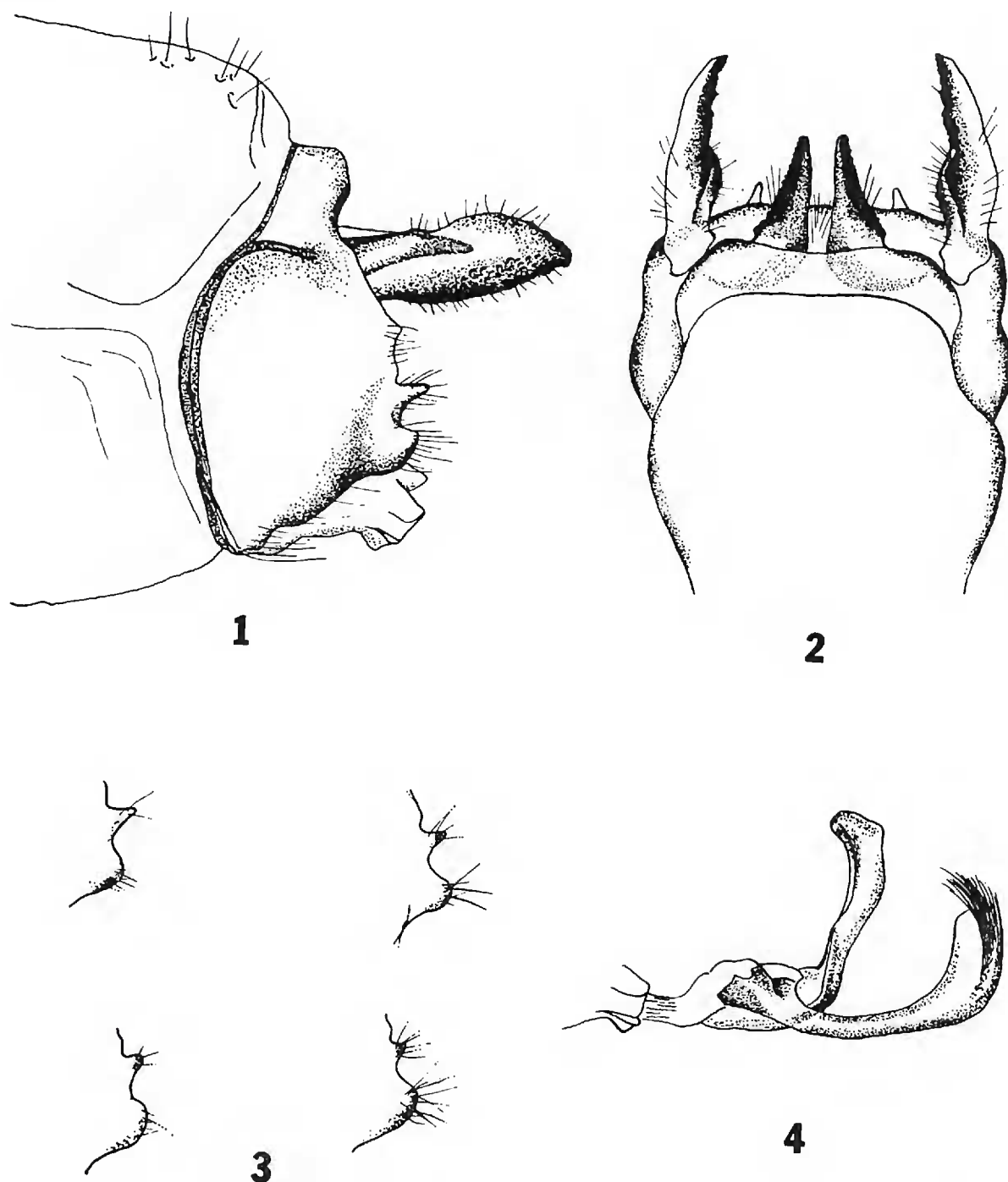
Limnephilus loloensis Smith, new species

(Figs. 1-6)

This species is a member of the *harrimani* complex, most closely related to *L. gioia* Denning. Adult males can be separated from other members of this complex by the nearly straight mesal margin of the cerci when viewed dorsally, the shortened tenth abdominal tergite, and the recurved apices of the lateral arms of the aedeagus.

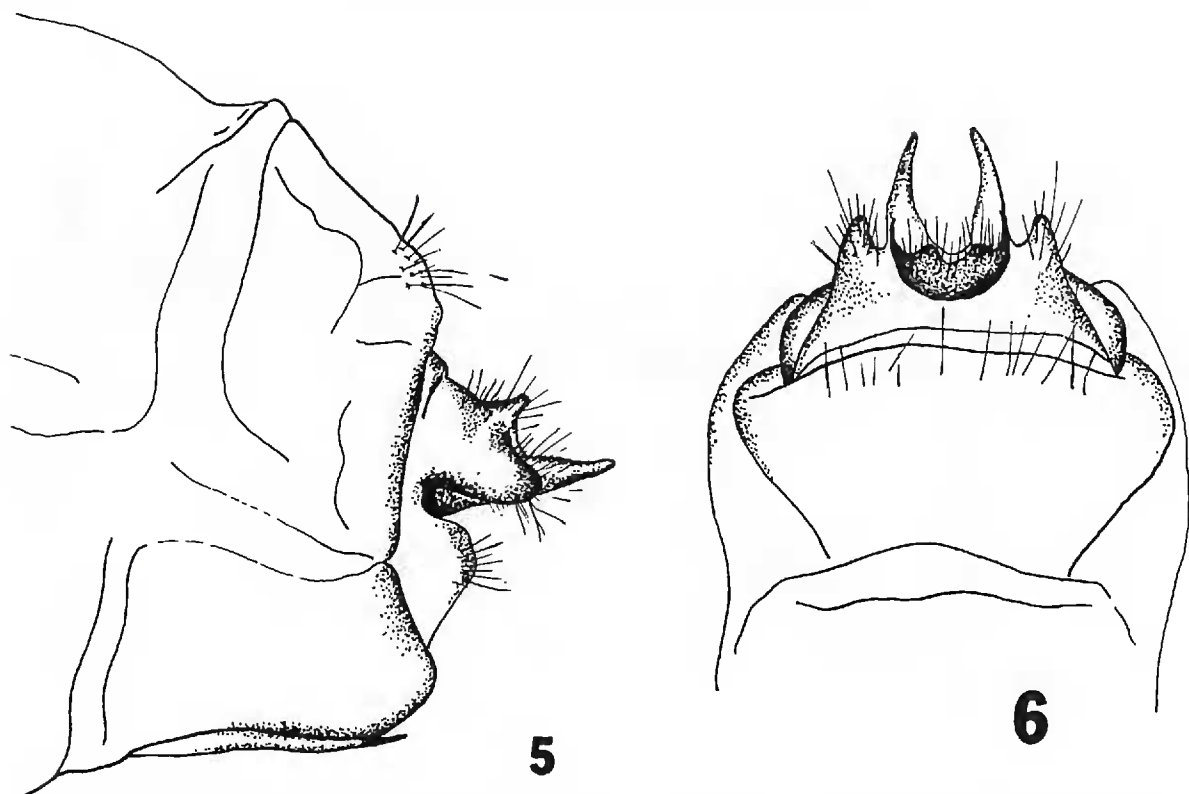
MALE.—Length 18 mm. Dorsum of body mottled with light and dark; head and thorax dark brown to black, abdomen and wings light brown, legs with coxae and femora dark, paling to light brown distally; front wings with hind margins with dark irregular markings, somewhat irrorate, veins with dark spots most distinct on posterior veins, but costa, subcosta, and radius 1 without any such maculations; individuals appear darker dorsally, fading ventrally when wings folded at rest; first basitarsus distinctly longer than second tarsal segment; antennae light brown; major setae of frontal area dark brown, remaining major setae of head and thorax light brown to pale yellow; wings with small, sparse setae.

Genitalia as in Figs. 1-4. Eighth abdominal segment with medium-sized distinct pale setae on posterior half, bases of setae giving posterior portion of tergum



FIGS. 1-4. *Limnephilus loloensis* male genitalia. FIG. 1. Lateral view; FIG. 2. Dorsal view; FIG. 3. Variation of claspers; FIG. 4. Aedeagus, lateral view.

and sternum a slightly warty appearance; eighth tergum without dense patch of short setae. Ninth abdominal segment robust, somewhat expanded laterally giving it more or less bulbous appearance, widest near lateral line; ninth tergum relatively broad, but distinctly narrowed strap with dorsal midline sunken giving posterior margin a slightly emarginate appearance in dorsal view. Cerci elongate, somewhat lanceolate; apical half slightly expanded dorsally; mesal surface roughly spatulate, dish-shaped surface with dense, small, dark irregular tubercles; dorsal and ventral margins of apical half of cerci irregular, dorsomesal margins nearly straight, parallel, slightly irregular in dorsal view. Tenth abdominal tergite short, approximately one half as long as cerci; triangulate in lateral view, apices acute; covered with many small, dark tubercles, black along ventral margin and at apex. Claspers



FIGS. 5-6. *Limnephilus loloensis* female genitalia. FIG. 5. Lateral view; FIG. 6. Dorsal view.

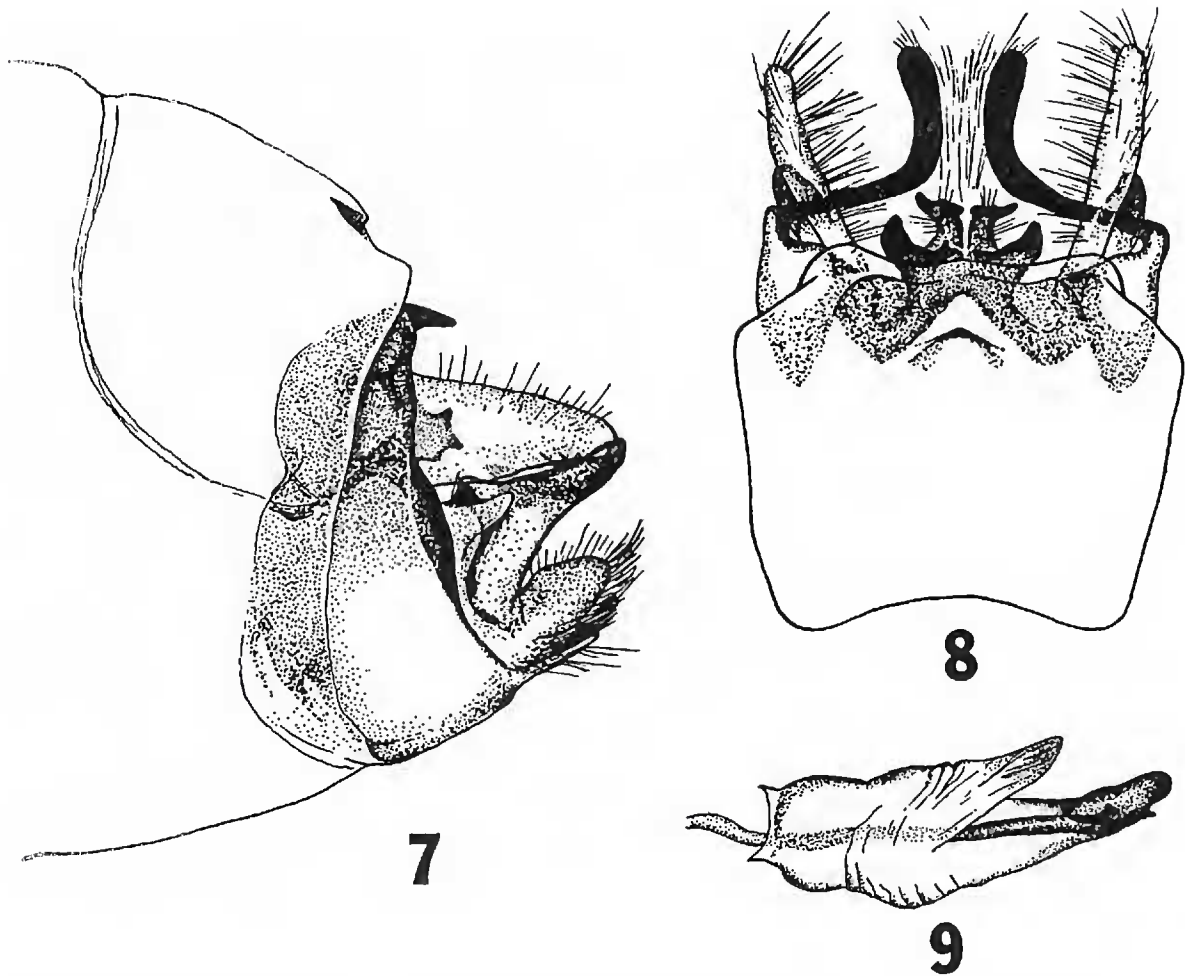
fused with ninth segment, projecting portion hirsute with posterior margin roundly emarginate forming dorsal and ventral lobes, dorsal lobe narrow and acute, ventral lobe slightly shorter and broadly rounded; clasper shape variable (Fig. 3). Aedeagus sclerotized, tubular, expanded at apex, apical portion recurved; lateral arms of aedeagus sclerotized, apical portions recurved, widest at curve; apices hispid, surmounted by many heavy spines.

FEMALE.—Length 12 mm. Smaller than holotype but similar in general appearance. Head, thorax, and abdomen uniform golden brown color, somewhat paler than male; spines on tibia and tarsi dark brown to black; wing coloration same as in male. Genitalia as in Figs. 5-6.

Holotype male, LOLO PASS, IDAHO COUNTY, IDAHO (at Idaho-Montana state line) elev. 5,187 feet, 14 August 1964, Richard Roberts. Deposited in California Academy of Sciences collection.

Allotype, same data as for holotype. The holotype and the allotype were a mating pair. Deposited in California Academy of Sciences collection. Paratypes: 3 males, 12 females, Lolo Pass, Idaho County, Idaho (at Idaho-Montana state line) elev. 5,187 feet, 28 July 1964, S. D. Smith (046); 1 male, 15 mi. w. Lolo Pass, Idaho County, Idaho, 16 July 1966, Donald S. Horning, Jr., attracted to white light. Deposited at University of Idaho and author's collection.

There is considerable size variation in this species. Males in the type series ranged from 12 mm to 16.5 mm; females ranged from 10.5 mm to 15 mm in length from head to wing tip.



FIGS. 7-9. *Homophylax auricularis* male genitalia. FIG. 7. Lateral view; FIG. 8. Dorsal view; FIG. 9. Aedeagus, lateral view.

***Homophylax auricularis* Smith, new species**

(Figs. 7-9)

This species belongs to the *flavipennis-acutus* complex and is most closely related to *H. flavipennis* Banks. It can be distinguished from other species in the genus by the shape of the tenth abdominal tergum with its short, broad ventral arms, by the cerci that extend posteriorly approximately as far as the aedeagus shield, and by the large aedeagus shield with its evenly narrowed apex, and by other features of the male genitalia. *Homophylax auricularis* belongs to Group II of Denning (1964) and would key out in Couplet 3 of his key to species.

MALE.—Head, thorax, and abdomen uniformly light brown to straw color, no distinct markings. Spurs 1-3-4. Forewing light brown, no distinct markings, basal portion of radial vein somewhat darkened; distinct narrow, semicircular flap present, arising as base of medial vein; radius large and distinct; subcosta and radius covered by semicircular flap, with single row of 5 to 10 stout black spines; underside of flap and scent pocket densely lined with scales, many short scales at base of costa and subcosta; anal area reflexed; underside of wing below flap with dense scales, long scales between costa and subcosta at base (oval scent pocket).

Hind wing with long, distinct furrow between subcosta and radius without scales; medial-cubital furrow deep, lined with small scales, many small spines which are very dense in the basal one-quarter of the wing, no spines in apical half of wing furrow. Transverse carina of sixth and seventh abdominal sterna with few spines. Eighth tergum with moderately sclerotized median carina, carina small but distinct; eighth tergum brown, slightly darker and more heavily sclerotized than eighth sternum, eighth tergum only slightly sclerotized on posterior lateral margins.

Genitalia as in Figs. 7-9. Ninth abdominal segment with sparsely scattered fine setae; dorsal strap of ninth tergum well sclerotized; in lateral view segment widest ventrally with short rounded projection of posterior margin starting near ventral margin of cerci as a continuation of margin of ninth sternite; ninth sternite wider than widest part of ninth tergum. Cerci large, extending caudally about as far as aedeagus shield; subtriangular; dorsal margin in lateral view slightly convex, apices narrowly rounded, ventral margin nearly straight; cerci with long fine setae on lateral and mesal surfaces, the most prominent hairs on dorsal margin and on dorsal one-third of mesal surface. Basal sclerite directed dorsocaudally, heavily sclerotized; in lateral view subtriangular, dorsal margin slightly concave, ventral margin convex; dorsal surface produced mesally to form a shelf-like structure; in dorsal view tooth-shaped, outer margin convex, mesal margin concave, apices rounded. Clasper in lateral view thumb-like, apical half with long fine setae; claspers fused on meson into narrowly rounded emargination; mesal portion of clasper forming flange around base of aedeagus. Aedeagus shield large, directed dorsocaudally, dorsal and ventral margins nearly parallel, dorsal margin slightly longer than ventral margin, apex evenly narrowed; long fine setae on mesal surface; dorsal margin and apex black. Tenth tergite with lateral plates closely appressed, appearing partially fused; dorsal and ventral prongs black, heavily sclerotized; dorsal prongs single, short, acutangulate in lateral view, broader in dorsal aspect; in dorsal view prongs divergently arcuate, apices directed caudad; ventral arms small, divergent, directed laterocaudad, with very small knob dorsally at base. Aedeagus typical for group, simple, very similar to that of *H. acutus*.

FEMALE.—Unknown.

Holotype male, BEAR, ADAMS COUNTY, IDAHO, 15 August 1951, A. J. Walz. Deposited in California Academy of Sciences collection.

Paratype: male, same data as holotype. Deposited in author's collection.

LITERATURE CITED

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